

What is claimed is:

1. A method of allocating a location-related order to one of a plurality of mobile agents, comprising the steps of:
  - 5 a) maintaining a current order record identifying a first location and first time at which each agent is expected to become free to fulfil a new order;
  - b) maintaining a prioritised listing of locations, with locations in said listing being prioritised for an agent according to the availability of the agent to reach each location after said first time;
  - 10 c) receiving said location-based order and recording the location and time at which said order is to be fulfilled;
  - d) determining from said prioritised listing of locations a suitable agent to fulfil said order; and
  - 15 e) allocating said order to said identified agent.
2. A method according to claim 1, wherein step a) comprises maintaining for each agent an individual current order file relating only to that agent.
3. A method according to claim 1, wherein step a) comprises maintaining a combined current order file relating to a plurality of agents, with said first location and first time identified for each such agent.
- 20 4. A method according to claim 1, wherein step b) comprises maintaining for each agent an individual prioritised location listing relating only to that agent.

5. A method according to claim 1, wherein step b) comprises maintaining a combined prioritised location listing relating to a plurality of agents, with each location being prioritised for one or more agents according to the ability of the or each such agent to reach each location after said first time relating to the agent.
6. A method according to claim 1, further comprising the step of:
  - updating the current order record for said identified agent with a new first location and first time at which said agent is expected to become free after fulfilling said order.
7. A method according to claim 1, wherein said step of allocating said order comprises
  - i) offering said order to said agent; and
  - ii) receiving confirmation of acceptance of the order from the agent.
8. A method according to claim 1, wherein said current order record identifies locations and times relating to all current orders assigned to said agent.
9. A method according to claim 1, wherein said listing of locations identifies the priority of each location with a time at which the agent is expected to be able to reach said location.
10. A method according to claim 1, wherein said listing of locations identifies the priority of each location with a priority identifier calculated from the distance between each such location and said first location, and the time between the current time and said first time.

11. A method according to claim 10, wherein said distance is a true geographical distance.
12. A method according to claim 10, wherein said distance is a distance calculated in a non-linear representation of an area including said locations.
- 5 13. A method according to claim 12, wherein said representation is selected from a grid of cells to which locations are mapped, a set of groups of locations, and a mesh of elements to which locations are mapped.
14. A method according to claim 1, wherein said locations are identified as cells within a grid to which locations are mapped
- 10 15. A method according to claim 1, wherein said locations are identified as groups of locations within a set of such groups.
16. A method according to claim 1, wherein said locations are identified as elements within a mesh of elements to which locations are mapped.
- 15 17. A method according to claim 6, further comprising the step of updating the prioritised listing for said identified agent when said order has been allocated, to take account of said new first location and new first time.
18. A method according to claim 1, wherein said first time is calculated from a journey time file which records expected journey times between locations.
19. A method according to claim 1, wherein said first time is input by an operator based on an expected journey time.
- 20 20. A method according to claim 19, wherein said operator is the agent to which the current order record relates.

21. A method according to claim 1, wherein the step of maintaining said current order record includes providing access to an agent to said current order record to edit the details recorded therein.
22. A method according to claim 1, wherein said current order file further includes details of an advance order, including a second location and a second time after said first time, at which said advance order is to be fulfilled, and wherein step d) includes the step of determining whether the agent is expected to be able to finish said new location-based order with sufficient time to fulfil said advance order.
23. A method of operating an ordering server for controlling location-based orders in respect of a plurality of mobile agents, comprising the steps of:
- a) maintaining a current order record identifying for each agent a first location and first time at which the agent is expected to become free to fulfil a new order;
  - b) maintaining a listing of locations, with locations in said listing being prioritised for each agent according to the availability of the agent to reach each location after said first time; and
  - c) updating said current order record and said listing for an agent when a new order has been assigned to said agent resulting in a new first location and first time being identified.
24. An ordering server for allocating location-based orders to a plurality of mobile agents associated with said server, comprising:

- a) a current order file storage area for maintaining a current order file which identifies for each agent a first location and first time at which the agent is expected to become free to fulfil a new order;
  - b) a location priority listing storage area for maintaining a listing of locations, with locations in said listing being prioritised for each agent according to the availability of the agent to reach each location after said first time;
  - c) an input interface for receiving said location-based order and recording the location and time at which said order is to be fulfilled;
  - d) a processor for determining from said prioritised listing of locations a suitable agent to fulfil said order; and
  - e) an output interface for allocating said order to said identified agent.
25. An ordering server according to claim 24, wherein said input interface comprises an operator interface for an operator to input details received from an ordering party.
26. An ordering server according to claim 24, wherein said input interface is selected from a web server hosting a user interface via which ordering parties can input order details, a Wireless Application Protocol (WAP) server hosting a user interface via which ordering parties can input order details, an Interactive Voice Response (IVR) unit via which a user can input order details and a Short Messaging Service (SMS) gateway for receiving SMS messages containing order details.

27. An ordering server according to claim 24, further comprising a map database correlating real geographical locations with location identifiers for use in identifying locations in said current orders file and said listing.
28. An ordering server according to claim 24, further comprising a journey times calculator for calculating an expected journey time between two locations.
29. An ordering server according to claim 24, further comprising an agent interface for an agent to access and edit said current orders file.
30. An agent profile for use in allocating orders to a mobile agent, comprising:
  - a) a current order file identifying a first location and first time at which the agent is expected to become free to fulfil a new order; and
  - b) a prioritised listing of locations, with locations in said listing being prioritised according to the availability of the agent to reach each location after said first time.
31. An agent profile according to claim 30, wherein said current orders file further includes details of all orders currently assigned to said agent.
32. An agent profile according to claim 31, wherein said details include a differentiation between current orders which are to be fulfilled immediately and advance orders.
33. An agent profile according to claim 30, wherein said current orders file relates to a single agent only.

34. An agent profile according to claim 30, wherein said prioritised locations listing relates to a single agent only.
35. A computer program product in machine readable form containing instructions which when executed cause an ordering server to:
- 5 a) maintain for each agent a current order record identifying a first location and first time at which the agent is expected to become free to fulfil a new order;
  - b) maintain for each agent a listing of locations in the vicinity of said first location, with locations in said listing being prioritised  
10 according to the availability of the agent to reach each location after said first time;
  - c) receive said location-based order and recording the location and time at which said order is to be fulfilled;
  - d) determine from said prioritised listing of locations a suitable agent  
15 to fulfil said order; and
  - e) allocate said order to said identified agent.
36. A communications network comprising an ordering server as claimed in claim 24.